

IN THE CLAIMS:

1 - 11 (canceled)

Please add the following new claims.

12. (new) An air-humidifying steam generator which humidifies air in an aircraft air conditioning system, comprising:

at least one first tank containing a water-based fluid;

a second tank containing a first reagent;

a third tank containing a second reagent;

a heat exchanger, comprised of an envelope about the second tank;

a steam discharge outlet; and

an air conditioning system,

wherein the first reagent and the second reagent combine to create thermochemical reaction in the second tank of the heat exchanger, converting the water-based fluid held in the envelope into steam, which is thereafter released into the steam discharge outlet connected to the air conditioning system.

13. (new) The steam generator in claim 12, wherein the envelope houses the second tank, in a coaxial orientation.

14. (new) The steam generator in claim 13, wherein the first reagent is a composite of calcium chloride and expanded natural graphite and the second reagent is an ammonia gas.

15. (new) The steam generator in claim 14, wherein the envelope is made of metal.

16. (new) The steam generator in claim 15, wherein the envelope comprises an opening connected to a discharge outlet that is intended to allow the diffusion of the steam.

17. (new) The steam generator in claim 15, wherein the envelope comprises an opening connected to a conduit whose free end opens into a duct of an air conditioning system.

18. (new) The steam generator in claim 17, wherein the free end of the conduit is equipped with a diffuser.

19. (new) The steam generator in claim 1, wherein the envelope is equipped with a pressure safety valve intended to make it possible to keep the fluid under steam pressure while it is being vaporized in said envelope.

20. (new) The steam generator in claim 1, wherein the first tank is connected, through an intermediary of distribution piping to the heat exchanger, the distribution piping being equipped with a valve allowing adjustment of the flow rate of the fluid toward the heat exchanger.

21. (new) The steam generator in claim 20, wherein a valve is power-operated and is controlled by a control unit allowing the adjustment of the flow rate of the steam produced by the steam generator.

22. (new) An air-humidifying steam generator which humidifies air in an aircraft air conditioning system, comprising:

at least one first tank containing a water-based fluid;

a second tank containing a first reagent;

a third tank containing a second reagent;

a heat exchanger, comprised of an envelope about the second tank, in a coaxial orientation;

a steam discharge outlet, equipped with a diffuser; and

an air conditioning system,

wherein the first reagent and the second reagent combine to create a thermochemical reaction in the second tank, converting the water-based fluid held in the envelope into steam, which is thereafter released into the steam discharge outlet connected to the air conditioning system.

23. (new) An air-humidifying steam generator which humidifies air in an aircraft air conditioning system, comprising:

at least one first tank containing a water-based fluid;

a second tank containing a first reagent;

a third tank containing a second reagent;

a heat exchanger, comprised of a metal envelope about the second tank, in a coaxial orientation;

a steam discharge outlet, equipped with a diffuser;

an air conditioning system;

wherein the first reagent is a composite of calcium chloride and expanded natural graphite and the second reagent is an ammonia gas; and

wherein the first reagent and the second reagent combine to create a thermochemical reaction in the second tank, converting the water-based fluid held in the envelope into steam, which is thereafter released into the steam discharge outlet connected to the air conditioning system.